

REMARKS

Applicants have considered the outstanding official action. It is respectfully submitted that the claims are directed to patentable subject matter as set forth below.

Applicants initially note that independent claim 1 has been canceled. The subject matter of claim 1 has been incorporated into claim 9. Further, dependent claim 10 has been canceled and the subject matter thereof incorporated into claim 9. Claims 3-8 and 15 are dependent claims which have been amended to depend on claim 9 directly or indirectly. Claim 2 has been canceled as now being duplicative to claim 11.

The outstanding rejections are as follows:

- (1) Claims 1-8 under 35 U.S.C. § 103(a) over Re 30,598 (Spencer) in view of U.S. Patent No. 6,257,967 (Schultz) and further in view of U.S. Patent No. 5,484,327 (Kovach);
- (2) Claims 9-14, 16-20 and 22-34 under 35 U.S.C. § 103(a) over Spencer in view of Schultz, further in view of Kovach and particularly in view of

International Application No. WO 00/21722

(Biagiotti);

- (3) Claim 15 under 35 U.S.C. §103(a) over Spencer in view of Schultz further in view of Kovach, particularly in view of Biagiotti and especially in view of Great Britain Patent No. 665,983 (Maatschappij); and

- (4) Claim 21 under 35 U.S.C. §103(a) over Spencer in view of Schultz, further in view of Kovach, particularly in view of Biagiotti and especially in view of U.S. Patent No. 3,507,633 (Dewez).

In view of the cancellation of claim 1, the rejection under 35 U.S.C. §103 denoted as (1) above is rendered moot. The sole pending independent claims are now 9 and 24, which are encompassed in the rejection denoted as (2) above.

Applicants submit there is no teaching or suggestion in the applied references to motivate combining the references in a manner to obtain applicants' claimed cutting machine and method for sharpening. Claims 9 and 24, and claims dependent thereon except claims 15 and 21, are rejected as being obvious over a combination of Spencer, Schultz, Kovach and Biagiotti. Claims 15 and 21 are

rejected based on the same combination and further in view of Maatschappij or Dewez, respectively, with respect to the additional limitations in claims 15 and 21. Applicants respectfully submit that no motivation exists to combine the applied references since at least Schultz is from an entirely unrelated technical field involving different problems and since Biagiotti is inconsistent with Spencer since Biagiotti teaches a single grinding wheel. The combination of art is further non-obvious since the different grits of the wheels of Kovach are used for a different purpose, in a different manner and on a different workpiece.

More particularly, Spencer and Biagiotti specifically relate to a cutting machine for cutting elongated rolls of paper, while Schultz refers to an entirely different device and addresses entirely different problems. One skilled in the art would not have combined Schultz with the Spencer and Biagiotti due to these differences. Schultz is directed to a sharpening unit for sharpening a rectilinear blade, and more specifically a veneer knife, for cutting logs to provide continuous sheets of the log which are joined to provide laminated sheets of veneer or plywood. One skilled in the art looking to

provide a more efficient cutting machine for producing rolls of paper would not look to Schultz because of the kind of blade, the shape of the blade, the material to be cut by the blade, and the motion imparted to the blade, are all different as compared to that described in Biagiotti and Spencer.

Further, even upon combination, applicants' claimed machine and method are not provided thereby. According to claim 10 (now part of claim 9), the inclination of the first grinding wheel with respect to the first side of the bevel and the thickness of the surface hardening treatment are such that the cutting edge of the blade remains within the thickness of the surface hardening treatment. The first grinding wheel does not remove entirely the hardening treatment on the surface on which the grinding wheel acts. Referring to Figure 7 of the captioned application, the grinding wheel 81 is positioned such that the tip of the blade, i.e., the portion indicated with the letter *l*, is formed by hardened material. Both sides of this tip are made of hardened material. This is achieved at least in part by the first grinding wheel having a finer grain than the second grinding wheel and having a function,

which is different from the function of the second grinding wheel 83.

The second grinding wheel 83 performs the actual grinding action by removing material from the blade and sharpening the tip thereof. The grinding wheel 83 performs this action since the grinding wheel is placed in full contact with the corresponding side of the bevel (see Figure 7). This, in combination with the coarser grain of the grinding wheel 83 causes sharpening of the blade.

Further, the grinding wheel 81 has a finer grain and an inclination (angle α in Figure 7), which is greater than the inclination of the corresponding side of the bevel (angle β in Figure 7). The actual effect and function of the first grinding wheel 81 is to support the blade against flexural deformations due to the action of the actual sharpening wheel 83 and at the same time keep the tip of the blade clean of burrs produced by the second grinding wheel.

These claimed features corresponding to the above are neither disclosed nor suggested by the art applied against claims 1, 9 and 10 (now claim 9).

Kovach is relied on by the Examiner for teaching different grits for different grinding wheels. Kovach, however, relates to an entirely different technical field

and the purpose of the two different grits for wheels 18 and 22 in Kovach is entirely different from that of the applicants' claims. The manner of using different grains for different wheels is also different.

Kovach teaches using different grinding wheels, which operate in sequence on the same surface of a workpiece, such that a coarse machining and a fine machining are performed in rapid sequence on the same surface of the same workpiece.

This is significantly different than the claimed machine and method which involve two grinding wheels, each with a differing grit, which act separately and selectively on different sides of a single bevel. In Kovach the second finer wheel follows the first coarse wheel on the same surface such that the same surface is treated with the coarser grit and then treated with the finer grit to obtain a final result characterized by a fine treatment. In applicants' claims, each bevel of the blade is treated by only one grinding wheel.

Accordingly, no basis is provided to suggest to one skilled in the art to replace the two grinding wheels of Spencer with grinding wheels having different inclinations and additionally having different grits. There is no

recognition in the applied art that such a combination would be beneficial or solve any technical problem.

For example, Spencer discloses a cutting machine with a cutting tool having no hardening treatment on the surface thereof. There is therefore no reason why one skilled in the art would have thought about using different grits for acting on different sides of the blade.

Further, Biagiotti teaches using a blade having a bevel, which is formed by two different surfaces, one of which is treated with a hardening treatment. Accordingly, Biagiotti teaches an asymmetric cutting blade wherein only one side of the bevel is sharpened by one single sharpening wheel 20 (see Figure 4 in Biagiotti). Therefore, Biagiotti teaches away from the claimed machine and method. Based on Biagiotti, one skilled in the art would recognize that if a cutting blade with a hardened bevel as described in Biagiotti is used in a device as described in Spencer, one of the two grinding wheels would become unnecessary and could be removed since the hardened side of the blade does not require and should not be sharpened.

Thus, one skilled in the art would not consider using two grinding wheels (let alone two grinding wheels having different grits) based on Biagiotti because Biagiotti

points away from that approach. There is no sound basis, other than applicants' own teaching, why one skilled in the art would have thought of using two wheels, one with a finer grit than the other, in combination with a blade having a hardened side as taught by Biagiotti. As set forth above, while Kovach teaches different grits, such are taught for use in a different environment than the machine and method of the present claims, for solving a different problem, and applied in a different manner on a different piece of machinery. The Examiner asserts that using two grinding wheels arranged according to a different inclination would have been obvious in view of Shultz. Applicants respectfully disagree because (as noted above) Shultz refers to a different kind of sharpening unit for a different kind of blade, i.e., a rectilinear blade rather than a disk-shaped blade for cutting wood veneers for formation of laminates. There is no reason why one skilled in the art would have considered in view thereof using different inclinations for the grinding wheels of Spencer which involves a blade for cutting an elongated roll of tissue into separate smaller rolls.

Additionally, there is no reason why such two differently inclined grinding wheels should be manufactured

with different grits in order to act on opposite sides of a bevel. Kovach suggests different grits for different wheels, but such act in a different manner to achieve a different function and result, i.e., in sequence rather than oppositely and selectively on different surfaces of a blade.

The combination of Kovach, Biagiotti, Shultz and Spencer is, therefore, submitted to be non-obvious and as not teaching or suggesting the claimed machine and method.

As to the rejections of dependent claims 15 and 21, such are rejected over the same references applied against claims 9 and 24 as set forth above and further in view of an additional reference, Maatschappij as to claim 15 and Dewez as to claim 21. Each of Maatschappij and Dewez are applied based on the additional limitations in claims 15 and 21 respectively. Accordingly, applicants submit that the additional applied references do not make up for the shortcomings of Spencer, Schultz, Kovach or Biagiotti as set forth above. Maatschappij and Dewez are each directed to a blade composition/structure, and not to a cutting machine including a sharpening apparatus containing a blade or method of sharpening as claimed.

Accordingly, applicants respectfully submit that the claims are not rendered obvious within the meaning of 35

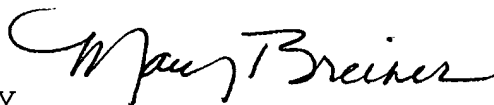
6517/USSN 10/531,053
Group Art Unit 3723

U.S.C. §103. Withdrawal of the rejections under 35 U.S.C.
§103 is respectfully requested.

Reconsideration and allowance of the application
are respectfully urged.

Respectfully submitted,

MARIO GIONI CHIOCCHETTI ET AL

By 

Mary J. Breiner, Attorney
Registration No. 33,161
BREINER & BREINER, L.L.C.
P.O. Box 320160
Alexandria, Virginia 22320-0160

Telephone: (703) 684-6885